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ABSTRACT

This report covers the risks to health, safety, and emotional well-being for infants and toddlers in child care settings, and examines opportunities for diminishing those risks and promoting healthy development. Part 1 examines the risks of poor caregiving practices, including the spread of infectious disease, the incidence of injury, and the risks to healthy emotional development. Part 2 proposes systematic approaches that states can use to diminish risks and to provide for the healthy development of infants and toddlers in child care, through the following four components of states' child care quality assurance systems: child care regulation, state planned health and safety training, child care monitoring, and data collection on the health and safety status of infants and toddlers in child care. The report calls for development of mechanisms to ensure that service systems operate in an integrated, coordinated manner. Appendices provide a recommended schedule for immunization; a list of conditions in children that call for immediate medical attention; a discussion of inclusion, exclusion, and dismissal of children with mild infectious diseases from child care settings; and recommendations for training of child caregivers. (Contains approximately 55 references.) (JDD)

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With the support of the Carnegie Corporation of New York, the Ford Foundation, the Foundation for Child Development, and the Smith Richardson Foundation, ZERO TO THREE/National Center for Clinical Infant Programs is producing several policy papers in 1993 describing and analyzing selected financing, regulatory, and nonregulatory approaches to improving infant child care. This paper was also supported in part by project #MCJ-513317 and the Maternal and Child Health Bureau Program (Title V, Social Security Act), Health Resources and Services Administration, Department of Health and Human Services.

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Preventing Preventable Harm to Babies: Promoting Health and Safety in Child Care

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1. It Is No Coincidence...Immunizations Save Lives.
2. What Vaccines Should A Child Have?
3. APHA/AAP Seventeen Conditions That Call for Immediate Medical Attention.
4. APHA/AAP Child Inclusion/Exclusion/Dismissal.
5. APHA/AAP Training Recommendations.

Preventing Preventable Harm to Babies: Promoting Health and Safety in Child Care

In 1990, the Secretary of Health and Human Services issued the nation's Year 2000 Health Promotion and Disease Prevention objectives. They are a call for action to improve the lives of young children many of whom suffer disease, disability, and death due to inadequate immunization, injury, exposure to environmental toxins, poor nutrition, and other preventable threats to health and safety (U.S. Department of Health and Human Services, 1990).

This paper covers the risks to health, safety and emotional well-being as well as the opportunities for diminishing those risks and promoting the healthy development of infants and toddlers in the child care setting. It is intended to assist state policymakers, researchers and practitioners in improving the lives of children and families. The policy changes recommended and the policy-making process outline will help to move us closer to both the goals of quality infant/toddler child care and child care that is an integral part of a comprehensive network of family support services.

Part 1 examines the risks of poor care - giving practices including the spread of infectious disease, the incidence of injury, and the less visible (but equally threatening) risks to healthy emotional development. Part 2 proposes systematic approaches states can use to diminish risks and to provide the healthy development of infants and toddlers in child care through the following four components of states' child care quality assurance system: (1) child care regulation; (2) state planned (affordable and accessible) health and safety training; (3) child care monitoring; and (4) data collection on the health and safety status of infants and toddlers in child care.

What do we know?

There is ample evidence that the foundations of strong, healthy development are built in the first three years of life (beginning with good prenatal care). This is a time when children are most vulnerable to disease, injury, and emotional harm that can have life-long effects. This is also the optimal period for identifying developmental problems. (Lally, Provence, Szanton & Weissbourd, 1988; Szanton, 1992). Yet it is the birth to 3 year-old children who receive the least attention from policymakers. Heart♥Start: The Emotional Foundations of School Readiness (ZERO TO THREE, 1992) which represents the collective views of experts from many disciplines on the Board of ZERO TO THREE, argues for a national commitment to policies that address the basic needs (the foundation) of their very young children. Infant child care is of special concern. Why?

- **Fifty-one percent of mothers with children under 3 years of age are currently working** (U.S. Department of Labor, Bureau of Labor Statistics, 1990). The reasons include: (1) lack of job-protected family leave; (2) increasing numbers of single parent families; (3) shrinking family income and the desire of many mothers to contribute financially; and (4) growing numbers of teenage parents and low-income families participating in welfare-to-work programs under the Family Support Act of 1988 (Young & Zigler, 1988).

- **One in five children lives in a family with earnings that fall below the federal poverty level. Many more families hover just above the poverty line** (U.S. Department of Health and Human Services, 1990; National Commission on Children, 1991).

- **Low-income employed parents and those affected by the Family Support Act are less likely to have a consistent source of preventive and primary health care for their children -- 30% use hospital emergency rooms as a primary health service** (Adams, 1990; U.S. Department of Health and Human Services, 1990; National Center for Children in Poverty, 1990).

- **The quality of infant/toddler child care has been found to be poor** (Willer, Hofferth, Kisker, Divine-Hawkins, Farquhar, Glantz, 1992; Whitebook, Howes, & Phillips, 1989; ZERO TO THREE, 1988).

- **Infants and toddlers of poor or low income employed families are more likely to experience child care of substandard quality** due to (1) lack of child care options, (2) high cost of quality care and (3) lack of quality standards required of infant child care in all settings, particularly child care funded under the Family Support Act (Sorentein & Wolf, 1988).

- **Increased health, mental health and safety risks have been associated with group care of infants and toddlers** (Belsky, 1988; Centers for Disease Control [CDC], 1990; Osterholm, 1990; Osterholm, Klein, Aronson, & Pickering, 1986).

There are immediate and essential steps that can be taken to improve the health, mental health, and safety of infants and toddlers in child care. There is evidence of a growing consensus among state policymakers, researchers, and practitioners around the need for linking health, mental health and child care services (Griffin & Fiene, 1992; Kagan, 1991; Pizzo, 1990). Moving towards interagency and interdisciplinary service planning that includes child care is essential to realizing the potential of quality child care (i.e., a comprehensive family-centered model that has been the strength of Head Start). Furthermore, recent major national reports offer explicit guidance based on the pooled expertise of professionals from many fields for improving the quality of infant and toddler child care.

With support from the U.S. Department of Health and Human Services' Bureau of Maternal and Child Health, the American Public Health Association (APHA) and the American Academy of Pediatrics (AAP) undertook a joint 4 year effort to identify and publish comprehensive health and safety performance standards and guidelines for child care. Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care offers an appropriately broad view of performance standards for child care. In the introduction, Dr. Albert Chang states: "Facilities must also provide a setting for nurturing and affection. They should not only protect the child, but should also promote the achievement of his or her fullest potential in both physical and psychological health" (American Public Health Association & American Academy of Pediatrics, 1992, p.xviii).

The authors of Heart♥Start also emphasize that physical and psychological health are inseparable for infants and toddlers. The foundation for healthy physical and emotional development is built on four basic and interrelated needs that must be met at home as well as in the child care setting if each child is to reach his/her full potential:

1. Good physical health (including early identification and treatment of congenital problems or developmental problems related to environmental risk).

2. Unhurried time with primary caregivers (specifically, time to develop a "caring relationship" with primary caregiver/s in the family and a primary caregiver in the child care setting).

3. Responsive caregiving (specifically, care by primary caregivers who (a) understand how children develop; understand and adapt to the unique temperament, rate of development, and communication style of each child and know how to foster healthy emotional, social, cognitive, and physical growth; and (b) who respect and involve the child's parent/family).

4. A safe and supportive environment (specifically, protection from known causes of injury and space that is arranged to encourage safe exploration and testing of developing skills).

While the relevance of "good physical health" and "a safe and supportive environment" to health and safety in infant/toddler child care is obvious, the field too frequently fails to address the essential contribution of the emotional well-being of the baby. It is one of the strengths of the APHA/AAP health and safety guidelines that they deal with all aspects of early development.

Part 1: Preventable Health, Mental Health, and Safety Risks Associated with Child Care

Infants and toddlers are the most infection-susceptible age groups due to their lack of prior exposure to most infectious pathogens (Donowitz, 1991). Research documents an increased burden for young children in child care or group care settings of mostly preventable minor and serious infections, including:

- a two-to-three times greater risk of infection by Haemophilus influenzae type b -- leads to meningitis in 12,000 children under 5 years of age per year; 1 in 4 suffer permanent brain damage; 1 in 20 die (Granoff and Cates, 1985);
- a four-to-nine fold increased risk of measles for minority children living in urban areas -- highly contagious; can lead to severe ear infection, pneumonia, encephalitis; 1 in 1,000 suffer mental retardation; 3 in 1,000 die (Centers for Disease Control, 1990);
- three-to-four times as much diarrheal disease -- can cause dehydration (CDC, 1990; Pickering, Bartlett, & Woodward 1986; U.S Department of Health Human Services, 1990); and
- higher incidence of colds and respiratory diseases -- can cause recurrent ear infections, hearing loss in some children; can lead to pneumonia (Presser, 1988; Wald, Dashefsky, Byers, Guerra, Taylor, 1987).

What proportion of the 40%-50% under-immunized children are in unregulated child care?

How many of these children contracted vaccine-preventable disease from other children or adults in their child care?

Of these very young children, how many did not have a primary care physician -- how many were seen only when sick enough for their parents to take them to an emergency care facility?

What was the cost to tax payers of the delayed treatment, hospital treatment, long term illness, physical or mental impairment?

What is the cost to the child and family of early and traumatic illness?

Vaccine-Preventable Diseases

Age appropriate immunizations for all infants and toddlers in out-of-home group care will prevent the spread of the most harmful diseases. These include diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, Haemophilus influenzae type b (Hib), and hepatitis B (See immunization brochure and schedule in Attachment 1).

High rates of immunization are recorded for licensed child care centers. The Centers for Disease Control (CDC) report that in 1988-89, 94% of children in licensed child care centers had their basic immunization series by age 2. The rate is 98% for children in Head Start programs, including infants and toddlers in Migrant Head Start and Parent-Child Centers (Centers for Disease Control, 1990).

There is less data on the immunization of infants and toddlers in family child care, in which an adult (usually a woman) cares for 2 or more (in some states up to 12) children in her home. Family child care is usually administered under a separate set of state rules. These can include licensing and monitoring, mandatory registration with few requirements and infrequent to no monitoring, or voluntary registration. For example:

- A 1988 survey of regulated care (including registered family child care) indicates that 12 states did not require immunizations in regulated family child care and 2 states have no regulations for family child care (Morgan, in press).

Little is known about immunization coverage for young children in unregulated child care (e.g., care by relatives, by babysitters, and many family child care homes) including license-exempt centers (e.g., church-based, school-based).[1] The paucity of data on unregulated child care makes it difficult to estimate the number of infants and toddlers in each of these forms of care. For example:

- For children under 36 months, recent studies vary in their estimates of the type of child care used, from 16% relative and 14% nonrelative-out-of-home care (Hofferth, et al., 1990) to 21% relative and 22% family child care (National Center for Children in Poverty, 1990).

- A 1990 survey estimated that 2.6 million or 83% of all children are in license-exempt or unregulated child care (Children's Defense Fund, 1991).

The CDC's surveys of the general population of children indicate coverage by age 2 for between 70% to 80% for specific diseases. Complete coverage with the full basic immunization series is, however, estimated at between 50% to 60% (Centers for Disease Control, 1990). The Healthy People 2000 objectives provide an even more dismal picture: 93% of newborns have at least one well-baby exam but less than 50% have received the required three doses of diphtheria-pertussis-tetanus (DPT) vaccine by 18 months (U.S. Department of Health and Human Services, 1990). The report indicates that children living in large urban areas, the majority of whom are African or Hispanic Americans, are "as much as 20% behind immunization rates for children living in other areas" (U.S. Department of Health and Human Services, 1990, p. 34).

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[1] Individual state's laws differ in their definitions of what child care is and in deciding what size and types of child care settings must be regulated (i.e. meeting certain standards in order to have a license, certification, registration, approval to operate). Very few states require that all people and organizations who provide child care must meet regulatory rules. Often states exempt people offering care to a small number of children in the providers home and/or they exempt services offered under the auspices of churches and/or schools. The laws usually authorize the state to develop rules (that have the force of law) in the key areas of health, safety, staff/child ratios, group sizes and program activities.

The degree to which services are monitored along with the sanctions or penalties for not complying with rules are outlined in each state's laws and/or regulations. Typically there are lower levels of requirements in family day care settings, with some states only requiring self certification and some having no monitoring. Depending on the definitions and exemptions in each state law, very high numbers of children are being cared for in child care settings that have no public oversight and have no standards for health and safety to meet.

It is symptomatic of the lack of collaboration between state child care and health agencies that state child care regulations can lag far behind the medical field in requiring the most current immunization schedules (U.S. Department of Health and Human Services, 1990). A significant gap has been the omission of vaccination requirements against Haemophilus influenzae type b (Hib). Hib disease is particularly dangerous for children under 3 in group care because it can lead to meningitis and other invasive bacterial diseases. Over 95% of all reported cases of Hib disease that led to meningitis were children under 5 years of age and 67% of those cases were infants 15 months and younger.

A highly effective vaccine has been available since 1985 and is currently available for children at 2 months of age. Yet a CDC survey taken in the 1991-1992 school year indicated that only 31 out of the 50 states required the Hib vaccine for children attending licensed or regulated child care. An intensive informational campaign by the CDC, APHA, and AAP has resulted in the inclusion of the Hib vaccine in child care regulations for licensed child care in most states in the last year.

Failure to include specific standards for a pre-employment caregiver physical is also a grave problem. For example, a highly reliable vaccine is available for the hepatitis B virus. (The AAP recommends vaccination for infants at birth, 2 months and, again, between 6 and 18 months). Occupational Safety and Health Administration (OSHA) rules of 1991, revised in July 1992, require that employers are responsible for assuring that all adults be protected by the three part vaccination series. Hepatitis B is not highly contagious. It is most frequently transmitted by contact with blood but can also be carried by mucous and other bodily fluids. Hepatitis B contracted in childhood or adulthood can lead to chronic liver disease, long-term chronic illness and a rare form of cancer in adults. Hepatitis B immunizations are generally not found in state child care regulations (Aronson, 1992).

Measles and rubella are diseases that are easily transmitted to unvaccinated adults. The recent measles epidemic provides a dramatic example of our failure to protect children and adults with a vaccine that has been available since 1963. From 1990 to 1991, more than 55,000 cases, 150 deaths, 11,260 hospitalizations, and 44,169 hospital days have been reported to the Centers for Disease Control (Addiss & Sacks, in progress). In 1990, the DHHS reported that one-third of white children and one-half of nonwhite children 1 to 4 years of age had not been properly immunized against measles (U.S. Department of Health and Human Services, 1990).

Lack of clear guidance on reporting cases of infectious diseases and lack of communication among child care programs and health services contribute to underreporting. Underreporting of cases of infectious disease may be contributing to spread of vaccine-preventable diseases such as measles. (Again, this underlines the need for collaboration on health and child data collection regarding the health status of infants and toddlers in child care). A national study conducted by researchers from the Center for Injury Prevention and Center for Infectious Disease of the CDC surveyed licensing staff, monitors, and directors of 20 child care centers in each state. Preliminary findings indicate that while 94% of the child care center directors said their center had written health policies, only 66% of the directors sampled said they had reported a case of measles to a health official or health agency (Addiss & Sacks, in progress).

An infant, who often spiked high fevers usually related to ear infections, came to the center healthy in the morning but at lunch was acting sluggish and despondent. His fever went from normal at noon to 103° at 1 P.M. The parent was called and the child was picked up. By Sunday morning the baby was hospitalized, went into a coma, and when revived was completely deaf and mentally retarded. The director spent time at the hospital, tried repeatedly to get information from the attending physician and the city health department about what had happened. It was meningitis caused by Haemophilus influenzae type b. The material and verbal information she could collect were in medical terminology. She had no health consultant and none of the health personnel contacted offered to help in translating the information into language parents and staff could understand nor could she obtain guidance on how to prevent other cases from occurring (experience of the author, 1980).

Are these directors irresponsible? Not necessarily. Not all states require written health policies. Those that do are rarely explicit regarding reporting procedures to health officials nor are they accompanied by guidelines for how to inform families and staff.

In a recent court case, a licensed child care center was assessed $300,000 in damages for not informing a family when they enrolled their infant that there had been two cases of meningitis. The new baby died of meningitis. There is no excuse for not informing new parents. Informing new families of known risks is a matter of good practice. But state and local health officials must share in the blame.

If child care providers are to report to families, and health officials, state and local health and child care agencies (i.e. regulatory agencies or resource and referral programs under state contract), they must have the following information in language they can easily understand and communicate to the families they serve:

- What diseases must be reported, to whom should the caregiver report, and how should she/he prepare a formal medical report to health officials?
- For specific diseases, what are the risks of infection, period of contagion, symptoms, and precautions to be taken to eliminate further spread of infectious diseases?
- What is the child care providers liability risk if they do not report, and, conversely, are they exposed to liability if they do report?

In turn, state and local health providers should reach out to child care providers, understand the particular risks of group care and have personnel available to respond to questions. Some states have established a toll free health information number (California and Pennsylvania have excellent health consultation models). In too many cases, however, the system is run by the state's public health agency without consultation or coordination with state child care agencies. The result is that questions specific to child care are not answered and child care providers are not informed that this is a service they can/should access.

Higher Incidence of Common Childhood Diseases

Proper hygiene, sanitation and other prevention strategies can greatly reduce the incidence of gastrointestinal diseases including those caused by viruses, parasites, or bacteria; acute respiratory diseases such as strep -

tococcal infection, scarlet fever, bronchitis, and croup; as well as otitis media (ear infections) suffered by infants and toddlers in group child care settings (American Public Health Association & American Academy of Pediatrics, 1992). Clearly written regulations, public information, caregiver training and guidance materials are needed that cover three essential components of a prevention strategy:

1. Knowledge and practice of proper handwashing techniques, handling and disposal of diapers, food storage and preparation, nose wiping, effective and safe methods of disinfecting diapering and toileting areas, furnishings, and toys.

2. Effective and efficient organization of space and supplies including safe storage of disinfectants, labeling of individual foods, clothing, and diapering supplies, easy access to diapering/toileting supplies and handwashing sinks.

3. Knowledge and practice of safe food preparation, feeding, diapering and toileting so that daily routines can be pleasurable and provide desperately needed time for one-to-one interaction with the infant/or toddler.

Giving caregivers written guidance material is important but more must be done. The overall well being and health of young children in group child care is significantly increased when information is combined with caregiver training and monitoring of practice (Aronson & Aiken, 1980; Bartlett, Jarvis, Ross, 1988; Donowitz, 1991).

Unfortunately, recent child care studies show that the majority of infant/toddler caregivers are neither given clear written guidance nor offered training in basic health and sanitation practices (Hofferth, Brayfield, Deich & Holcomb, 1990; National Governors Association, 1990; Whitebook, Howes & Phillips, 1989). For example, the following are taken from a recently updated survey of state regulations (Morgan, in press):

- Seven states do not refer to handwashing.
- Fourteen states include handwashing without details on how and when.
- Only 13 out of 50 states and the District of Columbia require specific health training or have detailed health policies and procedures.

The APHA/AAP guidelines also advise that caregiver guidance material and training can reduce unnecessary exclusion (thus decreasing the amount of work time parents lose) while increasing early recognition and action when the child's behavior and symptoms suggest the need for medical evaluation or at-home care. Their list of 17 recognizable conditions that should alert the child care provider that the parent should pick up the child immediately and get a medical appraisal could be included by states in their regulations, guidance materials, and training (American Public Health Association & American Academy of Pediatrics, 1992 Appendix H, p. 342). (See Attachment 4, for guidelines on conditions for exclusion.)

The APHA/AAP guidelines provide much needed guidance on the care of mildly ill children in child care -- an area where there is a great deal of confusion. States vary greatly in their regulations regarding the care of mildly ill children. Thirty states allow child care centers and 34 allow licensed family child care homes to care for ill children. Only 19 states provide detailed guidance about what constitutes mild illness (Morgan, in press). (See Attachment 4, for an excerpt from the APHA/AAP guidelines on policies regarding mildly ill children).

Injury

Injury is another highly preventable risk. Data on rates and severity of injuries to children in child care are limited and are also likely to reflect underreporting. (Chang, Lugg and Nebedum, 1989; National Academy of Sciences, 1990; Sacks, Smith, Kaplan, Lambert,

Sattin & Sikes, 1989). Several factors contribute to underreporting:

- Many states do not have specific regulations regarding the reporting of injuries requiring medical attention.
- Rates of injury are not broken down by place of occurrence.
- Neither the families nor the child care programs report injuries occurring in child care settings -- most don't know they should and, if they do, don't know who to report to.
- Emergency room reports do not specify the child care setting as the place of occurrence.

More than half of reported injuries in child care settings occur on the playground or outdoor play areas (Aronson, 1983; Landman & Landman, 1987; Sacks, 1990). The most frequent and severe injuries are associated with falls to hard surfaces, a risk that can be reduced by the use of impact absorbing materials under equipment, limitation of the height of climbers, and close supervision of play (Sacks, et al., 1989).

The APHA/AAP guidelines recommend resilient surfaces under play and climbing equipment that extend at least 4 feet beyond the fall zone and that consist of at least 9 inches of fine, loose sand, wood chips, mulch, or rubber mats recommended by the Consumer Product Safety Commission. Recent surveys indicate that state child care regulations are dangerously weak in this area:

- The 1988 APHA/AAP survey of the states found that only 10 states met the recommended standards for playground surfacing for child care centers and only 4 met them for family child care homes and group family child care homes.
- The CDC national survey of 20 child care center directors in each state found that only 54% described surfacing under the highest piece of playground equipment that met the APHA/AAP guidelines of adequate resilience to prevent head impact injuries (Addiss and Sacks, in progress).

Toddlers (between 12 and 36 months of age) have the highest rate of injury (Aronson, 1983). As children test new skills in walking, they are more prone to falls and collisions. Toddlers' growing sense of power and independence makes them more likely to test dangerous objects (stoves, electrical outlets, etc.) and to challenge encroachments by others with biting or scratching. Small staff-child ratios, small group sizes, and well-trained caregivers who understand the challenges and dangers of this exciting period of life are critical to providing the careful supervision and gentle guidance needed to minimize the risks of injury (American Public Health Association & American Academy of Pediatrics, 1992; ZERO TO THREE, 1992).

Researchers and early childhood experts have been consistent in stressing the importance of controlling ratios and group sizes for children under 36 months of age (American Public Health Association & American Academy of Pediatrics, 1992; Bredekamp, 1988; ZERO TO THREE, 1992). Heart♥Start, for example, recommends:

- 1:3 ratio and group size of 6 for noncrawlers;
- 1:3 ratio and group size of 9 for mobile infants to age 18 months;
- 1:4 ratio and group size of 12 for toddlers 18 to 36 months of age; and
- no more than 2 children under 24 months of age in family child care homes.

Mixed age groupings (e.g., 3 months to 3 year olds in same group) have many benefits and are the norm in Sweden and other European countries. The 1980 HEW Day Care Regulations (i.e., the 1980 U.S. Health and Human Services Day Care Regulations, still on the books, but essentially nullified when Congress made Title XX into a block grant) provide an excellent formula for setting ratios and group sizes for mixed groups:

For mixed age groups, a day care center shall meet the group size requirements for the age of the youngest child in the group, if children in the youngest age category make up 20% or more of the group. If children in the youngest age category make up less than 20% of the group, the group size requirement for the next highest age category must be met[U.S. Department of Health and Human Services, 1980, 45 CFR Part 71, 71.24(a)(iii) for centers, 71.44(a) for family child care and 71.24(d)(e)].

In 1992, only 3 states met 1:3 ratio recommendations for infants; 9 states allowed a 1:6 ratio; 19 allowed 1:8 or more; and 2 states allowed 1:12. Furthermore, 15 states had no group size requirements for centers.

> Try to imagine walking to a playground with 12 toddlers; imagine watching 12 toddlers as they run, stumble, climb and tumble; imagine handling an injury with 11 other toddlers running around; and, as the ultimate test, try to imagine evacuating 12 infants or 12 toddlers from a burning building! Imagine the daily life of a parent with triplets, quadruplets or quintuplets.

For many reasons, including the fact that demand exceeds supply and that salaries and benefits remain so very low, many states are experiencing a regulatory backlash in which certain groups of child care providers are pressing for relaxed staff-child and group size standards. For example, in the summer of 1992, the Illinois legislature passed a law allowing a 1:12 ratio in family child care homes and a 1:16 ratio for group family child care homes with one assistant present.

Caregiver training in injury management procedures to minimize harm to young children's health when injury does occur is vital. A majority of injuries sustained in child care (84%) can be sufficiently treated with first aid (American Public Health Association & American Academy of Pediatrics 1992). The APHA/AAP guidelines recommend that at least one caregiver with certification in pediatric first aid, rescue breathing and first aid for choking be available at all times when children are present.

Emotional Well-Being

Heart♥Start provides strong evidence that the roots of self-esteem, self concept, the ability to feel empathy for others and to develop secure, intimate relations are formed in the first years of life (ZERO TO THREE, 1992). While the relationship to the parent (or person/s who "parents" the child) is most important and is the constant in the child's life, the relationship that develops between caregiver and infant is also special and important.

The caregiver's sensitivity and responsiveness to the individual needs of the infant/toddler can reinforce the child's growing sense of self. Together these two qualities represent "responsive caregiving," which is one of the basic needs referred to in Heart♥Start. In some cases, the loving relationship between caregiver and infant or toddler may provide a critical source of emotional support where this does not exist with the parent and may help foster the development of a healthy, trusting bond between parent and child (Howes, Rodning, Galluzzo & Meyer, 1987).

Responsive caregiving requires training in infant/toddler development that includes attention to individual differences in temperament, rate of development and family culture. The correlation between caregiver training and ability to provide warm, responsive and individualized care has been well documented (Roupp, Travers, Glantz, & Coelen, 1979; Whitebook, et al., 1989). While the adage "parenting is not an instinct but a learned skill" is widely acknowledged, it is not reflected in federal and state priorities for training of caregivers in both the foundation knowledge of child development and the more complex set of skills required to manage a group of children while attending to the unique needs of the individual child.

The caring relationship requires unhurried time with the infant in order for the caregiver

to learn the individual needs, rhythms, and communication of the infant/toddler. Furthermore, unhurried time with family members through daily communication encourages mutual understanding, respect for cultural differences as well as increased continuity of caregiving between home and child care setting (ZERO TO THREE, 1992).

Unfortunately, too often infants and toddlers do not experience the benefits of a truly caring relationship. Heart♥Start identifies three problems that demand immediate attention:

1) Stability of child care providers over time;

2) Continuity through a primary caregiving system that protects the special relationship between caregiver-child-family until the child enters preschool at 3 years of age; and

3) Higher minimum child care wages and benefits to reduce the number of caregivers leaving the field each year (ZERO TO THREE, 1992).

There are many barriers to achieving the goals of stability and continuity. First, families may be forced to change caregivers in order to be eligible for needed child care subsidies (e.g., as the parent moves from child care subsidies funded under the Family Support Act to subsidies for low income working parents from the Child Care and Development Block Grant or the Social Services Block Grant). With each change, the infant or toddler suffers another separation and the family must take time from work or training to search for child care -- a difficult and emotional task for any working parent, but even more difficult when there are few available alternatives to choose from.

Eliminating this barrier requires joint planning among agencies that administer financial assistance for child care in order to eliminate conflicting eligibility and payment mechanisms so that child care subsidies can follow the parent as his/her income changes. Many states have found ways to streamline the various funding sources to achieve a continuum of child care support. Arizona, Florida, Hawaii, Illinois, Texas, and Vermont all have models worth examining. Some (e.g., Illinois) draw on state funds to secure "bridge funding" that continues child care subsidies while the parent is between programs. For example, assuring continuous child care subsidy so the family:

- can find child care while waiting for a JOBS placement or changing placement -- bridging JOBS child care funding or between training, education and employment;

- can continue with the same child care arrangement while looking for a job -- bridging JOBS with Transitional Child Care (TCC) funding; and/or

- does not have to change child care after the one year of FSA child care support -- bridging TCC and either Child Care Development Block Grant (CCDBG) or Social Services Block Grant (SSBG) or other child care subsidy.

A second factor that undermines the goals of caregiver stability and continuity is low caregiver salaries and benefits. Grossly inadequate compensation is the primary cause for an intolerably high turnover rate of 41% in child care centers, with some estimates of 60% for unregulated family day care (Whitebook, Howes and Phillips, 1989; Willer, 1990). This is a problem requiring a long term commitment. For one, the existing cost of infant/toddler care ranging from $6,000 to $10,000 per year is too much for most lower middle income parents. Further, optimizing staff-child ratios and group sizes will only increase the cost per child. It will take vision and leadership to develop a comprehensive and long-term strategy. Input will be needed from federal, state, and local policymakers, child care professional organizations, parent groups, and representatives of the private sector (employers, unions and philanthropic organizations) to attract, train, and retain child

care professionals who are adequately reimbursed and motivated to stay in the field.

Large staff to child ratios and group sizes allowed in many states represent another reason stability and continuity are so hard to attain. They make it difficult for the caregiver to manage daily tasks and next to impossible to give unhurried time to the individual child and family. In contrast, some states' well meaning attempts to control group size by imposing age limitations make primary caregiver assignment very difficult to manage and generally result in frequent changes in caregivers and peer group for the baby.

Finally, there is some resistance on the part of child care center staff and directors themselves, to use a primary caregiver system in which one caregiver is responsible for a small group of infants over time, as recommended in Heart♥Start as well as in the APHA/AAP guidelines. Reluctance is partially due to the lack of management and training information and resources demonstrating how to (1) establish primary caregiver relationships with 3-4 infants and families; (2) manage the movement of infants and their primary caregivers into more challenging routines and space appropriate for toddlers; and (3) train caregivers to be equally skilled in managing a group of infants and toddlers (or dealing with mixed age groupings). These problems require more research, models, training, and management tools.

Part 2: Strengthening State Approaches to Quality Assurance in Infant in Child Care

Reducing risks and maximizing the potential for promoting the health and safety of young children in child care requires systematic approaches to planning, implementing, and measuring health and safety in state child care services. Reports like ZERO TO THREE's Heart♥Start or the 1991 National Association of State Boards of Education's Caring Communities (prepared by a task force chaired by Governor Clinton) identify child care quality goals for state policymakers. Caring for Our Children, the APHA/AAP national health and safety performance guidelines, provides the content. This part of the paper outlines strategies for implementing these goals by using the APHA/AAP guidelines to strengthen four major components of states' child care quality assurance systems:

1. Child care regulations.
2. Caregiver health and safety training.
3. Program monitoring.
4. Data collection.

Improving State Child Care Regulations

Child care regulations establish legal baseline standards child care facilities must meet in order to be licensed to operate. Regulated child care may also have to meet state, county, or local codes for fire, environment, building, and health codes. States differ in the strength of their child care regulations because they represent standards of practice that the citizens of that state consider essential to protect children from harm (Koch, 1992). Through the administrative rule making process or grant and contract language, however, state administrators can set higher standards for child care.

While this discussion focuses on the formal regulatory system (state regulations set in statute and funding requirements set in administrative rules governing the use of public funds), attention is given to mechanisms a state can use to reach child care that is exempt from regulation as well as child care registered to receive public funds (see footnote in Part 1 for breakdown of categories of child care). One of the most difficult challenges faced by state administrators and advocates is developing effective strategies for

assuring health, mental health and safety protections for infants and toddlers cared for by unregulated child care providers. Registration to receive public funds offers one point of contact. Through the registration process, states can impose some minimal requirements (e.g., evidence of immunization for children served, a criminal background check).

The APHA/AAP health and safety guidelines identify over 980 "regulatable" indicators of health, safety, and overall program quality. States can use these guidelines in several ways. First, by comparing their state regulations to these national performance standards, child care administrators can identify areas of strength, weakness and gaps. Second, the guidelines are formatted in three columns: (a) the performance standard; (b) a rationale based on expert knowledge; and (c) a description of how the performance standard looks in practice. The appendices provide additional guidelines and resource materials (e.g., sample record forms, letters to families, and policy statements). Such explanations and examples can easily be simplified and packaged as guidance materials for consumers, licensing staff, and child care providers.

A systematic strategy state administrators can use to assess and strengthen their child care regulations might include the following components:

1. **Interagency review process;**
2. **Side-by-side comparison of state regulations with the APHA/AAP guidelines;**
3. **Examination of standards not included in state regulations;**
4. **Prioritized list of APHA/AAP performance standards and identify those to be adopted;**
5. **Use of the wording of the APHA/AAP performance standards to strengthen or clarify regulations that are weak or unclear; and**
6. **Identification of APHA/AAP guidelines, explanations and examples to be used in child care guidance materials and public information materials.**

An interagency review process is optimal because it utilizes the expertise and resources of health, EPSDT/Medicaid, public welfare (particularly Family Support Act - FSA), education, special education, and early intervention program administrators. They bring to the table current knowledge from their field. This is particularly important in the areas of disease and injury prevention, early identification of potential developmental delay, as well as how to care for infants/toddlers with special needs. The APHA/AAP guidelines were written through a collaborative process involving infant and family practitioners from many fields and are offered in a common language that facilitates collaboration.

Interagency collaboration in the review of child care regulations can have another advantage. It can maximize resources that can be used to develop public information materials, adapt existing materials to address the needs of a wider population of families and caregivers, and expand dissemination to reach a wider population of service recipients and service providers -- particularly unregulated child care providers and the families that entrust their infants and toddlers to their care.

A side-by-side comparison of state regulations with the national guidelines identifies areas of weakness and significant gaps. Administrators can begin their review with an examination of these gaps. Both the 1988 APHA/AAP and the 1990 CDC surveys indicate several areas where state regulations are frequently weak or absent:

1. **Caregiver health assessment;**
2. **Caregiver training;**
3. **Playground safety requirements;**

4. **Explicit reporting requirements for infectious disease and injuries requiring medical attention; and**

5. **Small staff-child ratios and group size requirements for all forms of regulated child care or those that receive public funds.**

A comparison of standards that are present in both offers a measure of adequacy. State regulations are often written and formatted for legal interpretation -- not for public understanding. The following exemplifies the problem:

> On a visit to a small center, the licensor found a rectal thermometer in the refrigerator. "Why is this here?" she asked. "It didn't make sense to me, but the regulations say keep a thermometer in the refrigerator," the caregiver responded.

Shocking? No. Regulatory language can easily be misunderstood by well-intentioned providers. They are not explicit, rarely offer a simple but convincing explanation for why the requirement is important to providing good care to children, and rarely (if ever) provide observable indicators of compliance. The APHA/AAP guidelines are highly specific and include indicators of compliance (e.g., examples and explanations) that help child care providers understand and examine their own practices and policies.

The APHA/AAP guidelines also offer excellent material that can be used for educational purposes. Families need information to help them assess the quality of care their child receives. They need to know how best to protect their infant or toddler's health and safety at home and in child care. In turn, caregivers are more likely to reach full compliance when given guidance materials that interpret the regulations and provide examples of how to set policies, arrange space and assess the safety of equipment, materials, and furnishings. Using the APHA/AAP guidelines in this manner may achieve two important objectives: (1) to improve program compliance with regulations, and (2) to motivate child care providers to go beyond the regulatory baseline.

Increasing State Planned Training for Infant/Toddler Caregivers

With appropriate support and training, child care providers can be active partners with the child's family and health professionals in assuring the primary prevention, early detection and prompt treatment of illness, disease, developmental delays, and other health and mental health problems (Aronson, 1989; ZERO TO THREE, 1992). Unfortunately, the majority of infant/toddler caregivers do not receive adequate training. Particularly lacking is specialized training in the care and development of children in the first three years of life as well as the special skills required for caring for infants/toddlers in groups.

State child care agencies can play an important role in addressing the need for better trained caregivers by implementing:

- **preservice and inservice training curricula that reflect current knowledge of practices and strategies for optimizing the healthy development and safety of infants and toddlers in out-of-home group care settings,**

- **delivery of training on a statewide basis so that it is easily accessible and affordable to caregivers who have little time to travel and have little money to invest in training, and**

- **health consultation to child care providers to offer information regarding health promotion, disease and injury prevention policies and procedures, as well as answer caregiver and parent questions.**

States vary greatly in their readiness to develop a statewide health and safety training curriculum and delivery system. The majority have no organized child care training system. This does not mean that educational and training opportunities are not available. Professional organizations, child care resource and referral programs, independent child care

training consultants, vocational and continuing education programs, college, and university degree programs are available but, it is a catch-as-catch-can system. The following examples show how states are moving toward a planned child care training system.

- Utah inventoried existing training/educational resources and assessed caregivers' needs as a first step towards the development of an effective/efficient plan that meets identified needs and uses all existing resources as well as identifying where training resources are not available. Utah also hired a training specialist through the Office of Child Care in the Department of Community and Economic Development to guide state efforts. Simultaneously, the state committed funds to developing a child care resource and referral system (essential to building infrastructural supports for its child care training system).

- Illinois, in order to develop a stronger training delivery system, created 16 resource and referral agencies geographically matched to its 16 service catchment areas. To meet identified training needs, the state contracted with the American Red Cross to deliver 3 training-of-trainers courses using the "American Red Cross Child Care Course" and with the Far West Laboratory Center for Early Childhood Research and Education to do a training-of-trainers session using "The Infant and Toddler Caregiver Program."

- Florida conducted a statewide inventory of its educational and training resources and developed curriculum modules (including a health and safety module, an infant/toddler module and a module on providing care for children with special needs in child care settings). The state has a detailed interagency work plan for implementing state training objectives. Furthermore, these executive branch initiatives are backed up by legislated training requirements -- 30 hours of training for all regulated child care providers and, most recently, a requirement that there be one staff member with a Child Development Associate credential or equivalent present for every 20 children in care.

- Delaware has developed a comprehensive statewide plan and delivery system based on a wide survey of needs and resources and interagency collaborative agreements to work toward implementation. Significant features of the plan include: (1) the specification of levels of training and multiple entry points; (2) the articulation of credit transfers from one level of training/education to the next; and (3) the goal of creating a state registry to document caregiver qualifications (Costley, Brown, & Morgan, 1990).

- Pennsylvania is developing a state training plan, modelled on the Delaware plan as well as on the pioneering work done by Susan Aronson, M.D. and Richard Fiene, Ph.D., through the Early Childhood Education Linkage System (ECELS). ECELS links public and private health nurses with child care providers to increase health supervision for children and improve the knowledge and practice of caregivers. The state, in conjunction with ECELS, is currently using an immunization training-of-trainers model involving teams of licensors, resource and referral staff, and public health nurses. Research conducted in conjunction with ECELS demonstrated significant quality improvements and efficient and effective strategies for gathering data to measure compliance with standards, identify training needs, and inform state policymakers where regulations were weak or lacking. These include the instrument-based monitoring and development of compliance profiles discussed in the next section (Fiene, 1992; Kontos & Fiene, 1986).

The limited sample above suggests several key elements essential to all state plans. Most important is a vision combined with the political will to carry it out. The plan can be developed and carried out by a few determined state administrators or a combination of advocates or professional organizations and state administrators. Because the cooperation of public and private agencies and institutions is involved in assuring the financial resources as well as delivery system resources, a collaborative model (i.e., one that involves key agency staff and individuals representing

educational and professional organizations) is most effective. Further, such efforts are most likely to succeed when backed by a governor's mandate and/or legislation that results in the following:

1. The adoption of a requirement for caregiver participation in health/safety training, preferably included in well-specified regulatory language that covers both the content and hours of training as well as levels of training for preservice, inservice, and continuing education.

2. The identification of a health and safety training curriculum (e.g., the American Red Cross Child Care Health and Safety Training Curriculum) and an infant-toddler curriculum (e.g., Far West Laboratory's Infant and Toddler Child Care Training Series developed for and distributed by the California Department of Education).

3. The identification of funds and a delivery system that makes such training available and affordable to child care providers across the state.

In order for these to be achieved, a delivery system must be identified or established. State administrators might start with the collection of baseline data on existing educational and training resources and services across the state. Such mapping indicates geographic areas that are poorly served. Data collected should include a caregiver needs assessment, a survey of training or educational program, training/course content and cost information. Ideally, a representative sample would include unregulated child care providers because the majority of infants and toddlers are in such settings.

> Pennsylvania has made outreach to unregulated caregivers a priority after a study of seven rural counties indicated they represented 84% of the available child care.

The optimal, long range goal should be to build a state training plan with an educational ladder or lattice that links educational opportunities to professional growth, recognition, and increased compensation. Reaching this goal involves many challenges, and requires creative thinking and long range planning on the part of all those who realize the need for recruiting and retaining a qualified, well trained child care workforce. There are a number of simultaneous initiatives led by national organizations that can offer invaluable assistance to state administrators:

- The Center for Career Development in Early Care and Education at Wheelock College has developed a rich array of useful written materials and consultant technical assistance services to states on the development of state child care training plans.

- The National Association for the Education of Young Children has created the Institute for Early Childhood Professional Development with the goal of identifying the essential criteria for a state early childhood professional certificate for trainers and caregivers.

- **ZERO TO THREE** continues to enhance and increase the number of training-of-trainers intensive seminars it offers to improve the quality of services for infants, toddlers, and their families across a wide range of disciplines and settings. The strength of this model is its emphasis on training teams who will continue to work together at the community or state level.

States that are ready to select a health and safety training curriculum or set criteria for courses/training offered across the state could use the APHA/AAP child care health and safety guidelines to establish the essential knowledge base and sequence of training. The guidelines are comprehensive and, thus, offer a good measure by which to assess the adequacy of training materials. The guidelines also describe a sequence of training that begins with orientation training in two stages, preservice and on-the-job. Regular inservice training is detailed and strongly recommended

as is continuing education, (See Attachment 4, for the content of training).

Increasing the Efficiency and Effectiveness of Child Care Monitoring

The regulatory system uses periodic monitoring to assure compliance and sets a schedule for renewing child care licenses. The literature on child care improvement strategies clearly demonstrates the importance of monitoring. Studies suggest that training of child care providers in basic hygiene practices, strategies for prevention of injuries and early identification of child illness or potential developmental problems can modify caregiver behavior. However, significant change occurs when this training is combined with monitoring of child care practices (Aronson & Aiken, 1980; Children's Defense Fund, 1991: Phillips, Lande, & Goldberg, 1992).

Most states, however, face serious weaknesses in their capacity to monitor and protect children in child care. Many states have too few qualified field staff to conduct inspections, monitor program compliance, respond to complaints or help providers to understand and meet requirements while, at the same time, pursuing violations. Licensing/monitoring staff are too often buried in paper work with no way to aggregate monitoring information to present policymakers with reliable data regarding compliance (Kontos & Fiene, 1986).

Lack of adequate monitoring puts children in child care at risk. It denies caregivers a vital resource for the clarification of state regulations and feedback on where their caregiving practices are weak. Despite the evidence, in the name of cost containment, state monitoring capacities are being depleted rather than strengthened. For example:

- Montana has a total of 2.7 full-time-equivalent licensors. Registration of family child care is mandatory, yet an estimated 40% to 60% do not comply. State licensors are able to monitor legal family child care on a random schedule of 14% per year.

- Illinois, in budget cuts, transferred or terminated 40% of its state licensing staff; and, simultaneously, Chicago's Health Department relinquished its role in monitoring child care.

Inadequate staffing to complete a regular schedule of inspections of child care is aggravated by the lack of efficient and reliable monitoring procedures and instruments. Too often monitors collect anecdotal information which is subject to bias and is of little use to state child care administrators who must report on the compliance status of regulated child care. Licensing/monitoring staff often lack training in child development and child care. In a system as varied as child care, it is essential that monitors know what to look for in small and large centers, family child care homes, family group homes, well endowed programs designed for children and those that are "hand made," (e.g., where many creative adaptations must be used to meet requirements).

Many states use checklists, which are more objective, but include all the regulations (although often worded in an abbreviated format). A checklist is a paper and pencil tool used by monitors to check compliance with state regulations when visiting regulated child care facilities. As a result the monitors' time is used inefficiently. They must spend as much time inspecting a program with a good compliance record as they spend in programs where problems are known to exist.

Some states use a short form checklist, which identifies what the state licensing office determines are key regulations. Such shortened checklists are more time efficient. They do not however, necessarily provide a reliable profile of compliance.

Richard Fiene, professor of early childhood education and a state administrator in Pennsylvania, has done a great deal of innovative work in the development of a research methodology for the design of

reliable monitoring instruments and procedures (Fiene & Nixon, 1983; Fiene & Melnick 1991). Reliable indicator checklists meet the following criteria:

- Each item on the indicator checklist has been statistically tested for validity and reliability in predicting compliance.
- Selected items on the checklist provide a reliable assessment of program compliance with all health and safety regulations.
- The checklist uses clearly observable indicators, thus limiting the time a monitor must spend in order to objectively assess compliance in a child care program.
- The checklist is easily understood, thus allowing the monitor to provide immediate feedback to child care providers on areas of noncompliance and actions to be taken to make necessary improvements.
- The checklist provides objective data across different child care settings, allowing monitoring staff to distinguish between child care programs that are in compliance and those that are not; and identifies programs requiring full and regular inspection in order to bring them into full compliance or, take legal action if noncompliance continues and/or puts children at risk (Fiene & Nixon, 1983).

The development of scientifically tested indicator checklists requires time and funds invested up front. In the long run, however, they result in time savings, greater efficiency and increased accuracy. They also greatly enhance the state's ability to gather reliable data on the health and safety of children in child care. Within states and nationally, we would have a more accurate profile of compliance for the regulated and publicly funded child care system if such checklists were commonly used. Such data is a critical link in the system that informs the decisions of legislators and administrators regarding the state's child care regulations, registration requirements, training, and monitoring needs.

Increasing States Data Collection Capacities

The lack of systematic state or national data collection of health and safety indicators in child care is a significant barrier to the improvement of all quality assurance efforts and to health promotion/outreach in child care settings. Building better data systems is a major public health challenge, since without data, effective health promotion strategies cannot be developed and targets cannot be set (e.g., the Healthy People Year 2000 Health Promotion and Disease Prevention Objectives).

A 1990 National Governors Association (NGA) survey of state child care regulatory agencies found that data collection appears to be a problematic issue for states. The survey revealed limited knowledge of basic program details. For example, only 1 of 50 states was able to report the total number of children by age group that each type of child care facility in the state was licensed or registered to serve (National Governors Association, 1990).

This is partially because in many states the registration system, which applies primarily to family child care and unregulated care receiving public funds, only records information about the child care provider (e.g., name, social security number and address, and, in some cases medical records and evidence of a criminal background check). Only the children covered by public funds are known.

In many states, that information is not pooled and aggregated with data from child care licensing since subsidies are handled through other child care agencies (e.g., including social welfare if AFDC or FSA funds are involved and, frequently, a separate child care office designated as lead agency for CCDBG funds).

The technology exists for standardizing monitoring through the use of indicator checklists (as discussed in the previous

section). A recent Government Accounting Office (GAO) study, "Child Care: States Face Difficulties Enforcing Standards and Promoting Quality," reported that 30 states have, or are in the process of developing a monitoring checklists approach (General Accounting Office, 1992). However, these are often short form checklists rather than scientifically tested indicator checklist, which are more reliable in providing state administrators with a profile of compliance and targeting programs or regions where compliance with regulations is lower. States can look to several innovative approaches in which customized computer profiles have been developed for use in a statewide system:

1. Early Childhood Education Linkage System (ECELS), Susan Aronson M.D., F.A.A.P., Project Director, Herberta Smith, R.N.. P.N.P., Project Administrator, The Daytona Building (Suite 220), 610 Lancaster Rd., Bryn Mawr, PA 19010. 1-800-24-ECELS in PA, 15-520-9125.

2. National Early Childhood Program Accreditation Indicator System, Richard Fiene, Director, PA Office of Child Care Services, Harrisburg, PA, 717-772-2099.

3. State regulation compliance profiles developed by ZERO TO THREE's Better Care for the Babies Project for Utah (completed) and Florida (in progress); and a weighing system developed with Utah's state licensing office as the first step towards developing an indicator checklist.

State child care and child health administrators do not have mechanisms for collecting and tracking health and safety data on the population served in child care settings. Medical history of the child, including special health needs, family income/eligibility for EPSDT and other public health or social welfare programs, outbreaks of infectious disease and illness, incidence of injury requiring medical attention, and participation rates in preventive health care, including immunizations typically are not tracked for children in child care.

Some states are making the investment in developing innovative approaches to pooling data across service systems. For example:

- Utah has developed an integrated, computerized tracking system using personal computers, capable of (1) following children from birth through newborn screening, and well-baby check-ups, and (2) identifying children with disabilities or at risk of disability. Follow-up for children needing additional screening and/or treatment services includes referrals to providers and potential financial assistance (e.g., Medicaid-eligible high risk infants for EPSDT screening and treatment referrals). Utah's child care licensing, family support services and maternal child health agency are exploring approaches to pooling data from their various agencies. If successful in this complicated and expensive task, Utah will have a profile of its young children in child care.

Ideally, state data systems would be designed to provide legislators and agency personnel with accurate information that would inform decision making. For example, child care administrators would know the following:

(a) how many children are in each type of child care service,

(b) whether and what kinds of public subsidies they receive,

(c) whether they are current on recommended immunizations and well-baby check-ups,

(d) how many children in child care are Medicaid eligible and whether they are receiving EPSDT services,

(e) how many require and receive screening and recommended intervention services for potential developmental and physical handicapping conditions,

(f) the incidence of infectious disease in specific child care programs, or by region or demographic area, and

(g) incidence of injury in specific programs, by region or demographic area.

Full automation of the child care licensing system is still very expensive. However, batch-oriented sampling systems, as developed for ECELS, Utah and in progress in Florida, are much more cost effective. The ultimate goal is greater protection for children in the child care system. Efficient and effective monitoring of regulated child care is both cost effective and offers policymakers vital information upon which to base decisions about where to invest limited child care funds.

Conclusion: Reaching Health and Safety Objectives in Child Care

Preventing the risks and maximizing theopportunities for promoting health, mental health and safety for infants and toddlers in child care settings requires commitments at all levels of government (federal, state, and local); commitments from public agencies, private sector organizations and businesses; as well as commitments from service providers (health, early intervention, social welfare, education, and child care) as well as service recipients (the families). Training, monitoring and informational materials must reach both the regulated child care providers and those who currently operate outside the formal regulatory system, but must be registered in order to receive public funds.

To realize opportunities for incorporating child care settings in a system of comprehensive services that meets the health, safety and developmental needs of all infants and toddlers (particularly low-income children), states must develop mechanisms to ensure that systems operate in an integrated, coordinated manner. State and local level interagency and cross-system collaboration assures that both expert knowledge and greater resources will reach the child care providers and families with essential information on protecting young children and promoting healthy development (Pizzo, 1990). Research and major national reports have set the goals. The APHA/AAP health and safety guidelines offer a rich and comprehensive knowledge base. Equal emphasis must be placed on strategies for reaching shared goals and putting knowledge into practice. This paper has offered some ideas on how to strengthen states' child care quality assurance systems; specifically, (1) strengthening child care regulations; (2) improving compliance through widely disseminated public information and clearly written guidance materials that explain state standards; (3) designing the content and delivery of child care health and safety training; (4) developing efficient monitoring systems; and (5) structuring data collection and analysis to inform policy decisions regarding the health and safety status of young children in child care.

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Joselyn's Story...

"In 1987 Joselyn began attending a day care center in Lexington, KY. In the weeks before her enrollment, two cases of meningitis had occurred among the children at the center; both recovered. Joselyn wasn't as fortunate. "The problem is Kentucky - like 19 other states - does not require the Hib immunization (which offers protection against some forms of meningitis) for day-care entry." ... When her mother picked her up from the center one autumn day, Joselyn seemed to be coming down with something. The cold- like symptoms escalated to fever, then she became lethargic. A trip to the hospital proved futile: Joselyn was pronounced brain dead on arrival. ...

Last spring, a jury held the day-care center liable and awarded $900,000 to the mother. " They found she had not been adequately informed of the risk of Hib from the two previous cases." Joselyn could have slipped through a number of cracks in almost any other state with the current patchwork of immunization regulations. She could have contracted the disease in the 30-day "Grace" period parents are allowed to secure immunizations, or been enrolled in a program (like family child care or church based care) exempt from immunization regulations.
(From Pediatric News, February 1992)

A Hib vaccination might have prevented Joselyn's death.
Unfortunately, fewer and fewer children in the U.S. are fully immunized by age 2.

RECOMMENDED SCHEDULE FOR IMMUNIZATION

Age of Vaccination	Hepatitis B~	DTP*	Polio*	Hib*+	Measles-Mumps-Rubella	Tetanus-Diphtheria
Birth	√					
1-2 months	√					
2 months		√	√	√		
4 months		√	√	√		
6 months		√		♦		
6-18 months	√					
12-15 mo.				♦		
15 months				♦	√	
15-18 mo.		√o	√			
4-6 years		√o	√			
11-12 years					√**	
14-16 years						√

* DTP= Diphtheria, tetanus, and pertussis vaccine; Polio= poliovirus vaccine; Hib= Haemophilus influenzae type b vaccine.

** Except where public health authorities require otherwise. (For example local health authorities may recommend a measles vaccine for infants at 6 months of age or a second MMR at 4-6 years-- please add check-marks based on local requirements).

♦ As of March 1991, two vaccines for Haemophilus influenzae infections have been approved for use in children younger than 15 months of age. The schedule varies for doses after 4 months of age depending on which vaccine is used.

o For the fourth and fifth dose, the acellular (DTaP) pertussis vaccine may be substituted for the DTP vaccine.

~ Both the AAP and the CDC recommend universal immunization of infants against hepatitis B virus with a 3-dose series, beginning at birth with a second dose at 1-2 months of age, and the third dose at 6-18 months of age. For a child whose mother tests positive for the virus, the immunization schedule will vary. AAP also recommends immunization of all older children and adolescents whenever resources permit. Compliance with these recommendations will require a phase-in period.

Adapted from recommendations of the American Academy of Pediatrics, 1992.

ZERO TO THREE/ National Center for Clinical Infant Programs, 2000 14th Street N., Arlington, VA 22201 (703) 528-4300

IT IS NO COINCIDENCE...IMMUNIZATIONS SAVE LIVES

Facts...

- Death occurs in as many as 1% (1 of 100) cases of measles.
- Brain infection occurs in 1 out of 1000 cases of measles; usually survivors are permanently brain damaged.

Since 1988 the reported cases of measles have been on the rise.

- 1988 -- 3,396 reported cases of measles
- 1990 -- 26,520 estimated cases of measles- 89 people died from measles

The risk for contracting vaccine-preventable illness is higher for infants and toddlers in child care.

Measles:

- "extremely likely" risk of rapid spread once introduced among unvaccinated children in child care.
- 26% of infants with measles have to be hospitalized

Haemophilus influenzae type b (Hib):

- Hib disease causes serious illness: *e.g.*, bacterial meningitis
- 30-35% of Hib cases result in neurological damage
- 2-5 fold increased risk among children in child care

Pertussis:

- 70% of young infants with pertussis have to be hospitalized

Pregnant child care providers or mothers can contract rubella and deliver infants damaged by the disease.

What can be done...

- The American Academy of Pediatrics recommends that children be immunized following the schedule on the back of this brochure.
- An essential resource for all homes, centers and states is *Caring for Our Children*, **national standards for health and safety in out-of-home child care** published by the American Academy of Pediatrics and the American Public Health Association.

Child care providers in centers or homes can...

- **Get training in health and safety.**
- **Maintain current immunization records on all staff and children in your center/ home.**
- **Identify health resources in the community that families can use to get immunizations.**
- **Encourage low-income families to explore eligibility for medical coverage under Medicaid.**
- **Require full immunizations for all staff and children in your center/ home.**
- **Develop a written procedure to keep families informed when infectious disease occurs in the center/home.**

States can...

- **Develop programs that limit the cost of vaccines to parents.**
- **Develop programs to immunize children.**
- **Pass regulations and registration requirements regarding immunization for all publicly-funded, non-relative child care with 2 or more unrelated children in care, including family child care.**
- **Educate parents, child care providers and health care providers.**
- **Place health/immunization coordinators in child care resource and referral agencies.**
- **Develop interagency collaboration between state-level health and child care offices on child care regulatory review, registration and health training for child care providers.**

Time from start of immunization...

(For children who were > one year old when their first dose was given)

LATE START

at start
(
start + 3 months
(
start + 5 months
(
start + 1 yr 5 months
(
By age 7 years
(

What Vaccines Should a Child Have?

The child should have received these doses:

Total number of DTP* or Td*	Total number of Polio*	Total number of Hib*	Total number of Measles, Mumps, Rubella	Total number Hepatitis B*

* DTP = diphtheria, tetanus, and pertussis vaccine; Polio = poliovirus vaccine; Hib = Haemophilus b conjugate vaccine; Hepatitis B = Hepatitis B vaccine; Td = tetanus diphtheria

** A second dose of Hib vaccine is given only to children whose first dose was received before fifteen months of age. Children over 5 years of age are not usually given Hib vaccine.

† In areas where an outbreak of measles has occurred, some health departments may have different recommendations. Consult a pediatrician or the local Department of Health for more specific recommendations.

†† A second dose of measles vaccine or M-M-R™II is recommended either before school entry or at 11 - 12 years of age. Consult a pediatrician or the local health department for more specific recommendations.

~ As of March, 1992, both the AAP and the CDC recommend universal immunization of infants against Hepatitis B virus beginning at birth or at 1-2 months of age. The AAP also recommends immunization of all adolescents whenever resources permit. Compliance with these recommendations will require a phase in period.

* The 5th DTP and 4th Polio are not necessary if the 4th DTP and 3rd Polio were given after the fourth birthday.

IMMUNIZATION DOSE COUNTER
1st EDITION 5/92

Recommended Schedule for Immunization

Age at Vaccination	Hepatitis B~	DTP*	Polio*	Hib*†	Measles - Mumps - Rubella	Tetanus Diphtheria (Td)
Birth	✓					
1-2 months	✓					
2 months		✓	✓	✓		
4 months		✓	✓	✓		
6 months		✓		✓††	--	
6-18 months	✓					
12-15 months				✓†††		
15 months					✓	
15-18 months		✓	✓			
4-6 years		✓	✓		--	
11-12 years					✓††	
14-16 years						✓

Adapted from recommendations of the American Academy of Pediatrics, 1992

* DTP = Diphtheria, tetanus, and pertussis vaccine, Polio = poliovirus vaccine, Hib = Haemophilus b conjugate vaccine, Hepatitis B = Hepatitis B vaccine.

** Except where public health authorities require otherwise. Measles only vaccine may be suggested for infants at 6 months of age. Some experts recommend the second dose of M-M-R™II at 4-6 years instead of at 11-12 years.

† As of March 1991, two vaccines for Haemophilus influenzae infections have been approved for use in children younger than 15 months of age. See individual manufacturers' prescribing information for details on dosing and administration.

†† Indicated only if HIBTITER® (Lederle) is used for the primary regimen.

††† 12-15 months for PedvaxHIB® (Merck) 15 months for HIBTITER® or PROHIBIT™ (Connaught).

~ As of March, 1992, both the AAP and the CDC recommend universal immunization of infants against Hepatitis B virus with a 3 dose series, beginning at birth or at 1-2 months of age. The AAP also recommends immunization of all adolescents whenever resources permit. Compliance with these recommendations will require a phase-in period.

The Immunization Dose Counter was developed by Susan S. Aronson, M.D., F.A.A.P. It is distributed by the PA Chapter of the American Academy of Pediatrics which is solely responsible for its content. Grant support was provided by Merck Vaccine Division.

REMINDER: The content of the Immunization Dose Counter was reviewed by the Centers for Disease Control and the American Academy of Pediatrics in 1992. Check for updates annually with a pediatrician or your local Department of Health.

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HOW TO USE THE IMMUNIZATION DOSE COUNTER TO CHECK IF A CHILD IS OVER-DUE FOR A VACCINE:

FIRST: To decide which of the two immunization dose counters to use (RIGHT START or LATE START):

- Find the child's birthdate.
- Add one year to the child's birthdate.
  eg. birth date = 3/25/90
  birth date +1 year = 3/25/91
- Compare the date when the child was one year old with the date of the first dose of DTP, Polio, Hib and Hepatitis B vaccines.
- If the child was less than one year old when the first dose was given, use the RIGHT START Dose Counter; otherwise, use the LATE START Dose Counter.

To use the RIGHT START Dose Counter:

- Determine the child's age in years and months by subtracting the child's birthdate from today's date. (Put down the year, month, days.)

eg. If today's date is	92	3	8
(-) the birthdate	90	3	25

borrow 30 days from months and 12 months from years to be able to subtract:

		14	
	91	2	38
Today's date is	92	3	8
(-) the birthdate	90	3	25
the child's age is	1 yr	11 mos.	(and 13 days)

- Slide the inner panel of the RIGHT START Dose Counter down until the color dot fills the circle under the period that includes the child's age. Read the number of doses of each vaccine the child should have received in the window. Compare this number with the actual number of doses the child received.
- Be sure that children over 15 months of age received their last dose of measles and Hib vaccines after the child's first birthday, no matter how many doses were given at younger ages.

To use the LATE START Dose Counter:

- Determine the time between today's date and the date when the child received first doses of DTP, Polio, Hib, and Hepatitis B.
- Slide the inner panel of the LATE START Dose Counter to the time since the child started immunization.
- Read the number of doses of each vaccine the child should have received in the window. Compare this number with the actual doses the child received.

By the time a child is...

3 to 4 months (

5 to 6 months (

7 to 15 months (

16 to 18 months (

19 months to 6 years (

7 years (

13 years (

17 years (

RIGHT START

What Vaccines Should a Child Have?

The child should have received these doses:

Total number of DTP* or Td*	Total number of Polio*	Total number of Hib**	Total number of Measles Mumps, Rubella	Total number Hepatitis B*

* DTP = diphtheria, tetanus, and pertussis vaccine; Polio = poliovirus vaccine; Hib = Haemophilus b conjugate vaccine; Hepatitis B = Hepatitis B vaccine; Td = tetanus diphtheria.

** Three different types of Hib vaccine are currently available. Each has a different dosage regimen. The Merck vaccine (PedvaxHIB®) requires three doses optimally at 2, 4 and 12-15 months of age. The Lederle vaccine (HIBTITER) requires four doses optimally at 2,4, 6 and 15 months of age. The Connaught vaccine (PROHIBIT) is not indicated for use in infants less than 15 months of age. Since the records maintained by parents often do not specify the type of Hib vaccine used, the completeness of a child's Hib immunization status should be certified by the child's health provider. Children over 5 years of age are not usually given Hib vaccine.

† In areas where an outbreak of measles has occurred, some health departments may have different recommendations. In some areas measles vaccine is routinely given at 12 instead of 15 months of age. Consult a pediatrician or the local Department of Health for more specific recommendations.

†† A second dose of measles vaccine or M-M-R®II is recommended before school entry or at 11 - 12 years of age. Consult a pediatrician or the local health department for more specific recommendations.

‡ As of March, 1992, both the AAP and the CDC recommend universal immunization of infants against Hepatitis B virus beginning at birth or at 1-2 months of age. The AAP also recommends immunization of all adolescents whenever resources permit. Compliance with these recommendations will require a phase in period.

• The 5th dose of DTP and the 4th dose of polio vaccine are not necessary if the previous dose of the vaccine was given after the fourth birthday.

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Attachment 3: APHA/AAP Seventeen Conditions That Call for Immediate Medical Attention

For some conditions, you need to get medical help immediately. When this is necessary, and you can reach the parent without delay, tell the parent to come right away. You may also have the parent tell the doctor that you will be calling because you are with the child. If the parent or the child's doctor is not immediately available, contact the facility's health consultant or Emergency Medical Services for immediate medical help.

Tell the parent to come right away and get medical help immediately when any of the following things happen:

- An infant under 4 months of age has an axillary armpit temperature of 100 degrees Fahrenheit or higher or a rectal temperature of 101 degrees Fahrenheit or higher.
- A child over 4 months of age has a temperature of 105 degrees Fahrenheit or higher.
- Any infant under 4 months of age has forceful vomiting (more than once) after eating.
- Any child looks or acts very ill or seems to be getting worse quickly.
- Any child has neck pain when the head is moved or touched.
- Any child has a stiff neck or severe headache.
- Any child has a seizure for the first time.
- Any child acts unusually confused.
- Any child has uneven pupils (black centers of the eyes).
- Any child has a blood-red or purple rash made up of pinhead-sized spots or bruises that are not associated with injury.
- Any child has a rash of hives or welts that appears quickly.
- Any child breathes so fast or hard that he or she cannot play, talk, cry, or drink.
- Any child has a severe stomachache that causes the child to double up and scream.
- Any child has a stomachache without vomiting or diarrhea after a recent injury, blow to the abdomen, or hard fall.
- Any child has stools that are black or have blood mixed through them.
- Any child has not urinated in more than 8 hours; the mouth and tongue look dry.
- Any child has continuous clear drainage from the nose after a hard blow to the head.

Attachment 4: APHA/AAP Child Inclusion/Exclusion/Dismissal

Exclusion of many children with many mild infectious diseases is likely to have only a minor impact on the incidence of infection among other children in the group. Thus, when formulating exclusion policies, it is reasonable to focus on the needs and behavior of the ill child and the ability of staff in the out-of-home child care setting to meet those needs without compromising the care of other children in the group.

Chicken pox, measles, rubella, mumps, and pertussis are highly communicable illnesses for which routine exclusion of infected children is warranted. It is also appropriate to exclude children with treatable illnesses until treatment is received and until treatment has reduced the risk of transmission. The presence of diarrhea, particularly in diapered children, and the presence of vomiting increase the likelihood of exposure of other children to the infectious agents that cause these illnesses. It may not be reasonable to routinely culture children who present with fever and sore throat or diarrhea. However, in some outbreak settings, identifying infected children and excluding or treating them may be necessary.

Fever is defined as an elevation of body temperature above normal. Fever may or may not preclude a child's participation in the facility. The height of the fever does not necessarily indicate the severity of the child's illness. A child's overexertion in or hot, dry climate may produce a fever. Generally, young infants show less fever with serious illness than older children. Infants and children older than 4 months should be excluded whenever fever is accompanied by behavior change, signs, or symptoms of illness. Infants 4 months old and younger should be excluded for rectal temperature of 101∘ a higher or axillary (armpit) temperature of 100∘ or higher, even if there has not been a change in their behavior.

Children with fever are managed differently in child care. The presence of fever alone has little relevance to the spread of disease and may not preclude a child's participation in child care. A small proportion of childhood illness with fever is caused by life-threatening diseases, such as meningitis. It is unreasonable and inappropriate for child care staff to attempt to determine which illness with fevers may be

serious. The child's parents or legal guardians, with the help of their child's health care provider, are responsible for these decisions; therefore, parents should be informed promptly when their child is found to have a fever while attending child care.

Exclusion of children with diarrhea may not prevent the spread of disease, but is for the child's welfare. Exclusion of children with a vomiting illness may not prevent the spread of the disease.

Conjunctivitis, which is usually associated with viral upper respiratory and intestinal infection, is most often transmitted by the respiratory route (e.g., coughing, sneezing, nasal discharge, and saliva). This type of conjunctivitis is usually nonpurulent, defined as pink conjunctiva with a clear, watery eye discharge and without fever, eye pain, or eyelid redness. This type of conjunctivitis usually can be managed without excluding a child from a facility, as in the case of children with mild respiratory infection. Such a case, however, might require exclusion if a responsible health department authority, the child's health care provider, or the facility's health consultant determines that the child's conjunctivitis is contributing to transmission of the infection within or outside the facility.

Purulent conjunctivitis, defined as pink or red conjunctiva with white or yellow eye discharge, often with matted eyelids after sleep, and including eye pain or redness of the eyelids or skin surrounding the eye, is more often caused by a bacterial infection, which may require antibiotic treatment. Children with purulent conjunctivitis, therefore, should be excluded until they have been examined by the child's health care provider and cleared for readmission to the facility, with or without treatment, as determined by the health care provider.

Children in child care who develop signs and symptoms of a severe illness, even though fever is absent, should not be managed as are children with mild to moderate illness. Standard HP68 in this section describes exclusion criteria for more seriously ill children.

Attachment 5: APHA/AAP Training Recommendations

1. ORIENTATION TRAINING

(a) The goals and philosophy of the facility.

(b) The names and ages of the children for whom the caregiver will be responsible, and their specific developmental needs.

(c) Any special adaptation(s) of the facility required for a child with special needs.

(d) Any special health or nutrition need(s) of the children assigned to the caregiver.

(e) The planned program of activities at the facility.

(f) Routines and transitions.

(g) Acceptable methods of discipline.

(h) Policies of the facility about relating to parents.

(i) Meal patterns and food-handling policies of the facility.

(j) Occupational health hazards for caregivers.

(k) Emergency health and safety procedures.

(l) General health policies and procedures, including but not limited to the following:

1) Handwashing techniques, including indications for handwashing.
2) Diapering technique and toileting, if care is provided to children in diapers and/or needing help with toileting, including appropriate diaper disposal and diaper-changing techniques.
3) Correct food preparation, serving, and storage techniques if employee prepares food.
4) Formula preparation, if formula is handled.

(m) Child abuse detection, prevention and reporting.

(n) Teaching health promotion concepts to children and parents as part of the daily care provided to children.

(o) Recognizing symptoms of illness.

2. TRAINING IN FIRST THREE MONTHS

During the first three months of employment, the center director or large family home caregiver shall document, for all full-time and part-time staff, additional orientation in the following topics for the purpose of noting and responding to illness in the facility. Staff shall not be assigned to tasks in these areas before

receiving the orientation training and demonstrating satisfactory knowledge of the topics covered.

(a) Recognition of symptoms of illness and correct documentation procedures for recording illness symptoms.

(b) Exclusion and readmission procedures.

(c) Cleaning, sanitation, and disinfection procedures.

(d) Procedures for administering medication to children and for documenting medication administered to children.

(e) Procedures for notifying parents or legal guardians of communicable disease occurring in children or staff within the facility.

(f) Procedures for performing the daily health assessment of children to determine whether they need to be excluded from the facility.

3. FIRST AID TRAINING

The American Red Cross *Child Care Course* includes training on infant and child first aid, of which rescue breathing and first aid for choking are components. Training should include, but not be limited to, the emergency management of:

(a) Bleeding.

(b) Burns.

(c) Poisoning.

(d) Choking.

(e) Injuries, including insect, animal, and human bites.

(f) Shock.

(g) Convulsions or nonconvulsive seizures.

(h) Musculoskeletal injury (e.g., sprains, fractures).

(i) Dental emergencies.

(j) Head injuries.

(k) Allergic reactions.

(l) Eye injuries.

(m) Loss of consciousness.

(n) Electric shock.

(o) Drowning.

4. SIXTEEN HOURS OF CONTINUING EDUCATION IN CHILD DEVELOPMENT

The following are suggested topics for directors and caregivers to select in meeting their 16 hours of continuing education in child development programming.

(a) Child growth and development.

(b) Appropriate services for infants, preschool and school-age children, children with disabilities, migrant children, and children with limited English proficiency.

(c) Mainstreaming children with special needs in child care.

(d) Child development activities for children who are ill.

(e) Child observation.

(f) Acceptable methods of discipline.

(g) Planning learning activities.

(h) Scheduling, pacing, and transitions.

(i) Design of space.

(j) Communicating with families.

(k) Opportunities to reinforce learning through talking.

(l) Techniques for group development.

(m) Child care administration and policies.

(n) Death, dying, and the grief cycle.

(o) Methods of effective communication with children, parents, and coworkers.

The following are suggested topics for directors and caregivers to select in meeting their eight hours of continuing education in child health, child safety, and staff health.

(a) Communicable disease management:
- Handwashing.
- Handling contaminated items.
- Using disinfectants.
- Avoiding contact with urine, saliva, secretions.
- Preventing transmission of blood-borne diseases.
- Routes of Human Immunodeficiency Virus (HIV) transmission and prevention.

- Food handling.
- Formula preparation if applicable.
- Cytomegalovirus (CMV) infection.
- Knowledge of immunization requirements.
- Policies for exclusion/admission.
- Assessing the health of children.
- Recognizing symptoms of illness.
- Temperature taking.
- Ability to describe minor illness.
- Documenting and managing minor illness.
- Caring for ill children.
- When and how to call for medical assistance.
- Administering medication.

(b) Occupational health and safety.

(c) Injury prevention.

(d) Transportation safety.

(e) Emergency response procedures/first aid.

(f) Child abuse detection, prevention, and reporting.

(g) Linkages with community services, including facilities that enroll children with special needs.

(h) Nutrition:

- Foods and nutrition.
- Application of foods and nutrition to child development and family health.
- Information and behavioral skills to use in selecting and preparing more healthful diets.
- More effective means of communicating nutrition information to people in different age and ethnic groups.
- The creation of a physical, social, and emotional environment that supports and promotes development of sound food habits, and the role of the caregiver in helping child and family achieve adequate nutrition.
- Healthy food choices in the home, in schools, and at the worksite, by health care providers as part of government food service programs (such as State Maternal and Child Health Nutrition, Project Head Start, National School Lunch Program, and Women, Infants and Children Supplemental Food (WIC) Programs).